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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

STATISTICS

SOUTHWESTERN REGION

(Arizona and New Mexico)

February 1, 1937

FOREST PATHOLOGY
ALBUQUERQUE, N. M.
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For'd. Rec'd.

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ORIGIN OF SOUTHWESTERN NATIONAL FORESTS

Dates of Proclamations and Executive Order	Name of National Forest
ARIZONA	
Apache	
August 17, 1898	Black Mesa National Forest
July 1, 1908	Part of the Black Forest Reserve became the Apache National Forest
(The above covers only the portion of the Apache National Forest in Arizona)	
Coconino	
August 17, 1898	San Francisco Mountains Forest Reserve
July 2, 1908	All of the San Francisco Mountains Forest Reserve and parts of the Black Mesa, Tonto and Grand Canyon were consolidated under the name of the Coconino National Forest
Coronado	
November 5, 1906	Baboquivari Forest Reserve
November 6, 1906	Huachuca Forest Reserve
November 7, 1906	Tumacacori Forest Reserve
July 2, 1908	Baboquivari, Huachuca and Tumacacori Forest Reserves consolidated under the name of the Garces National Forest
April 11, 1902	Santa Rita Forest Reserve
July 2, 1902	Santa Catalina Forest Reserve
May 25, 1907	Dragoon National Forest
July 2, 1908	Santa Rita, Santa Catalina and Dragoon National Forests consolidated under the name of the Coronado National Forest
April 17, 1911	Garces and Coronado National Forests consolidated under the name of the Coronado National Forest
July 30, 1902	Chiricahua Forest Reserve
November 5, 1906	Peloncillo Forest Reserve

Dates of Proclamations And Executive Order	Name of National Forest
	Coronado (Continued)
July 2, 1908	Chiricahua and Peloncillo Forest Reserves consolidated under the name of the Chiricahua National Forest. (Portion of the Peloncillo in New Mexico.)
June 6, 1917	Chiricahua and Coronado National Forests consolidated under the name of the Coronado National Forest
(The above covers the entire Forest situated in Arizona and New Mexico)	
	Crook
July 22, 1902	Mt. Graham Forest Reserve
March 20, 1905	Pinal Mountains Forest Reserve
October 3, 1905	Tonto Forest Reserve
January 13, 1908	Pinal Mountains Forest Reserve became part of the Tonto National Forest
July 1, 1908	Parts of the Mt. Graham and Tonto National Forests, including the Pinal Mountains area, consolidated under the name of the Crook National Forest
	Kaibab
February 20, 1893	Grand Canyon Forest Reserve
July 2, 1908	All of the San Francisco Mountains and parts of the Black Mesa, Tonto, and Grand Canyon National Forests consolidated under the name of the Coconino Natl. Forest
June 28, 1910	Part of the Coconino National Forest together with certain other land not heretofore reserved became the Tusayan National Forest
May 22, 1908	Dixie National Forest (Arizona)
July 2, 1908	Kaibab National Forest
March 18, 1924	Dixie consolidated with the Kaibab
August 4, 1934	The Tusayan and Kaibab National Forests consolidated

Dates of Proclamations And Executive Order	Name of National Forest
Prescott	
May 10, 1898	Prescott Forest Reserve
December 30, 1907	Verde National Forest
July 2, 1908	Prescott and Verde National Forests consolidated under the name of the Prescott National Forest
Sitgreaves	
July 1, 1908	Parts of the Black Mesa and Tonto National Forests consolidated under the name of the Sitgreaves National Forest
Tonto	
October 3, 1905	Tonto Forest Reserve
NEW MEXICO	
Apache	
January 23, 1925	A portion of the Datil National Forest was transferred to the Apache National Forest. This portion was originally part of the Magdalena and Gila River Forest Reserves.
Carson	
November 7, 1906	Taos Forest Reserve
July 1, 1908	Carson National Forest created by consolidation of the Taos National Forest and part of the Jemez National Forest
Cibola	
October 5, 1906	Mt. Taylor Forest Reserve
November 5, 1906	San Mateo Forest Reserve
"	Magdalena Forest Reserve
November 6, 1906	Manzano Forest Reserve
April 16, 1908	Mt. Taylor National Forest consolidated with the Manzano National Forest

Dates of Proclamations And Executive Order	Name of National Forest
	Cibola (Continued)
June 18, 1908	Creating the Datil National Forest
July 2, 1908	San Mateo National Forest added to the Magdalena National Forest
February 23, 1909	Magdalena and Datil National Forests consolidated.
March 2, 1909	Zuni National Forest
September 10, 1914	Zuni National Forest consolidated with the Manzano National Forest
December 3, 1931	Name of the Manzano changed to Cibola National Forest and a portion of the Datil transferred to the Cibola.
	Gila
March 2, 1899	Gila River Forest Reserve
February 6, 1907	Big Burros Forest Reserve
June 18, 1908	Consolidating the Big Burros with the Gila National Forest
December 24, 1931	A portion of the Datil was transferred to the Gila National Forest
	Lincoln
July 26, 1902	Lincoln Forest Reserve
November 5, 1906	Gallinas Forest Reserve
April 19, 1907 April 24, 1907	Guadalupe National Forest Sacramento National Forest
July 2, 1908	Guadalupe and Sacramento National Forests consolidated as the Alamo National Forest The Gallinas and Lincoln National Forests consolidated as the Lincoln National Forest.
June 6, 1917 (effective July 1)	The Alamo National Forest transferred to the Lincoln National Forest

Dates of Proclamations And Executive Order	Name of National Forest
Santa Fe	
January 11, 1892	Pecos River Forest Reserve
October 12, 1905	Jemez Forest Reserve
July 1, 1908	Pecos River National Forest changed to Pecos National Forest
July 1, 1915	Jemez and Pecos National Forests consolidated as the Santa Fe National Forest
October 3 1905	Portales Forest Reserve
March 1907	The Portales National Forest restored to the public domain

Note: The foregoing covers only changes of name and major transfers. There have been many additions, eliminations and changes in boundaries not listed.

NATIONAL FOREST IMPROVEMENTS (GOVERNMENT OWNED) ON JULY 1, 1936

Fire Control and Administration:

	Number	Miles	Construction Costs
Telephone Lines		4,147	$ 542,557
Fire Breaks		13	3,429
Lookout Houses	35		32,267
Lookout Towers and Observatories	124		84,072
Dwellings, Headquarters	89		249,894
Dwellings, Temporary Stations, etc.	255		139,967
Barns, Headquarters	85		146,321
Barns, Temporary Stations	65		26,638
Offices, Headquarters	63		105,682
Offices, Temporary Stations	2		1,096
Other Improvements, Headquarters	334		105,073
Other Improvements, Temporary Stations	267		54,418
Other Improvements, Road and Trail	47		28,986
Fences, Headquarters		220	87,407
Fences, Temporary Stations		329	65,163
Water, Headquarters	102		107,675
Water, Temporary Stations	137		35,757
Total	1,605	4,709	1,816,402
Public Service:			
Camp Buildings	581		80,353
Water	105		115,478
Improved Campgrounds	210		468,500
Total	896		664,331
Range:			
Fences		7,388	2,053,217
Corrals	179		15,270
Improved Stock Driveways		127	5,416
Stock Bridges	1		3,403
Water Development	1,115		469,332
Other			24,514
Total	1,295	7,515	2,571,152
Roads		5,869	21,790,458
Trails		4,062	587,015
Total		9,931	22,377,473
GRAND TOTAL	3,796	12,224	$27,429,358

RANGER DISTRICTS IN REGION 3

Arizona		New Mexico	
Apache National Forest	2	Apache National Forest	3
Coconino " "	6	Carson " "	6
Coronado " "	5	Cibola " "	7
Crook " "	6	Coronado " "	1
Kaibab " "	5	Gila " "	7
Prescott " "	6	Lincoln " "	6
Sitgreaves " "	4	Santa Fe " "	7
Tonto " "	8		
	42		37

TOTAL FOR REGION - 79

NUMBER AND CAUSES OF FOREST FIRES ON NATIONAL FOREST LAND

1936

Forest and State	A Less Than ¼ A.	B ¼ to 10 A.	C 10 and Over	Total	Light-ning	Camp-Ry.	Camp-ers	Smok-ers	De-bris Burn-ing	In-cen-di-ary	Lum-ber-ing	Mis-cel-lan-eous	Total M. C. Fires
ARIZONA													
Apache	95	23	1	119	113	0	2	4	0	0	0	0	6
Coconino	291	79	7	377	328	1	13	28	0	0	1	6	40
Coronado	42	23	5	70	54	0	1	13	0	2	0	0	16
Crook	22	10	0	32	24	0	0	3	3	1	0	1	8
Kaibab	176	41	5	222	192	0	11	15	0	0	1	3	30
Prescott	49	20	0	69	39	0	6	17	3	1	0	3	30
Sitgreaves	104	51	6	161	136	0	5	17	0	2	0	1	25
Tonto	33	33	4	70	61	0	0	7	0	1	0	1	9
Total ARIZONA	812	280	28	1120	947	1	38	104	6	7	2	15	173
NEW MEXICO													
Apache	54	15	3	72	67	0	1	4	0	0	0	0	5
Carson	12	5	1	18	7	0	3	7	0	0	0	1	11
Cibola	15	6	3	24	19	0	0	4	0	0	0	1	5
Gila	168	41	2	211	199	0	3	8	1	0	0	0	12
Lincoln	20	4	2	26	20	0	2	2	1	0	1	0	6
Santa Fe	27	5	0	32	29	0	1	2	0	0	0	0	3
Total NEW MEXICO	296	76	11	383	341	0	10	27	2	0	1	2	42
Total Region 3	1108	356	39	1503	1288	1	48	131	8	7	3	17	215

TIMBER DATA

Acreage and percent of commercial, non-commercial, and non-commodity sawtimber lands.

ARIZONA

Ownership of Sawtimber Areas

	Commercial	Non-commercial & Non-commodity	Total Acreage	Percent
National Forests	2,366,000	706,000	3,072,000	64.9
Indian Reservations	1,215,000	239,000	1,454,000	30.7
Public Domain		20,000	20,000	0.4
National Park		110,000	110,000	2.3
State	28,000	3,000	31,000	0.7
	3,609,000	1,078,000	4,687,000	99.0
Private	42,000	4,000	46,000	1.0
TOTALS	3,651,000	1,082,000	4,733,000	100.0

NEW MEXICO

National Forests	2,271,000	1,901,000	4,172,000	67.3
Indian Reservations	322,000	40,000	362,000	5.8
Public Domain		20,000	20,000	0.3
State	121,000	15,000	136,000	2.2
	2,714,000	1,976,000	4,690,000	75.6
Private	1,092,000	420,000	1,512,000	24.4
TOTALS	3,806,000	2,396,000	6,202,000	100.0

VOLUME OF TIMBER COMMERCIAL FORESTS

ARIZONA

National Forests		12,781,000,000 ft. B. M.
Indian Reservations		5,036,000,000
State		100,000,000
	TOTAL	17,917,000,000 ft. B. M.
Private		109,000,000
	TOTAL	18,026,000,000 ft. B. M.

NEW MEXICO

National Forests		8,207,000,000 ft. B. M.
Indian Reservations		486,000,000
State		484,000,000
	TOTAL	9,177,000,000 ft. B. M.
Private		3,906,000,000
	TOTAL	13,083,000,000 ft. B. M.

This Table does not include non-commodity or non-commercial volume.

TIMBER MANAGEMENT

Estimate of Sawtimber in M Ft. B. M. In Southwest - Includes Non-commodty and non-commercial.*

	Arizona	New Mexico
National Forests	14,489,000	11,253,000
Indian Reservations	5,531,000	566,000
Other Federal Lands	545,000	20,000
State	110,000	521,000
Private	118,000	4,837,000
TOTAL	20,793,000	17,197,000

Cordwoods in Cords

National Forests	10,894,000	13,448,000
Other	19,000,000	20,000,000
TOTAL	29,894,000	33,448,000

Area sawtimber type - Arizona 4,733,000 Acres or 6.4% of total
" " " - New Mexico 6,202,000 " " 7.8% " "
Woodland forests cover 27.95% of total area of the two states.

Area sawtimber type in National Forests of Arizona - 3,072,000
" " " " " " " New Mexico - 4,172,000

Total area cutover land, sawtimber type, in Arizona, to January 1, 1937
655,000 Acres (Estimated)
Total area cutover land, sawtimber type, in New Mexico, to January 1, 1937
1,001,000 Acres (Estimated)

National Forests of Region 3 are:
35% Woodland
34% Sawtimber
31% Untimbered
About 73% of gross area of New Mexico Forests belong to the Government.
About 98% of gross area of Arizona Forests belong to the Government.

TIMBER LAND DATA BY PER CENTS - BASED ON AREA

Arizona		New Mexico	
National Forests	64.9%	National Forests	67.3%
Indian Reservations	30.7	Indian Reservations	5.8
Public Domain	0.4	Public Domain	0.3
National Park	2.3		
Total Federally Owned	98.3%	Total Federally Owned	73.4%
State	0.7	State	2.2
Total Federal & State	99.0%	Total Federal & State	75.6%
Private	1.0	Private	24.4
Grand Total	100.0%	Grand Total	100.0%

Above data includes commercial timber, non-commercial, and non-commodity.

*Latest data.

TIMBER CUT FROM THE NATIONAL FORESTS

M ft. B. M. Fiscal Year 1936

Forest	Commercial Sales	Cost Sales	Exchange	Total Cut	Total Value	Amount Free Use (M. ft.)
Apache	542	178		720	$ 1,439.75	1,321 *
Coconino	17,083	115		17,198	37,704.00	1,299
Coronado	1,648	12		1,660	3,932.79	841
Crook	1,085	80		1,165	2,385.67	2,407
Kaibab	19,569	30	6,860	26,459	58,431.42	699
Prescott	1,541	8		1,549	2,890.78	1,722
Sitgreaves	49,329	30		49,359	121,280.18	4,090
Tonto	644	48		692	2,529.27	1,214
ARIZONA	91,441	501	6,860	98,802	230,533.86	13,593
Apache	943	132		1,075	2,298.56	(See note)
Carson	1,924	287		2,211	4,621.01	8,691
Cibola	1,512	153	830	2,495	5,491.84	3,693
Gila	1,636	90		1,726	3,694.47	2,419
Lincoln	5,068	68	2,069	7,205	13,516.59	2,220
Santa Fe	1,142	123	3,863	5,128	11,630.87	5,230
NEW MEXICO	12,225	853	6,762	19,840	41,253.34	22,253
REGION 3	103,666	1,354	13,622	118,642	$271,787.20	35,846

* Includes free use on Apache for both Arizona and New Mexico

Cumulative Increment of Ponderosa Pine In Different Periods After Cutting
(Data collected and compiled by Southwestern Forest and Range Exp.Station)

Residual Volume	Years After Cutting					
	5	10	15	15	20	25	30
Ft. b. m.	Ft. b. m.	Ft. b. m.	Ft. b. m.	Percent	Ft. b. m.	Ft. b. m.	Ft. b. m.
200	50	145	200	7.3	320	420	520
600	100	250	390	4.3	520	670	800
1,000	165	325	495	3.3	680	870	1,030
2,000	260	515	805	2.7	1,090	1,340	1,610
3,000	350	700	1,125	2.5	1,550	1,825	2,230
4,000	460	900	1,410	2.4	1,910	2,430	2,900
5,000	540	1,050	1,640	2.2	2,240	2,800	3,350
6,000	620	1,220	1,860	2.0	2,550	3,250	3,875
7,000	670	1,350	2,070	2.0	2,800	3,550	4,250
8,000	735	1,480	2,250	1.9	3,050	3,950	4,650
9,000	775	1,550	2,400	1.8	3,200	4,050	4,700
10,000	800	1,650	2,500	1.7	3,250	4,000	4,800

(Note: Increment volumes in lower portion of table are subject to considerable error due to too few plots. Volumes beyond 20 years were obtained by extending curve.)

NUMBER OF TREE SPECIES

According to U. S. Department of Agriculture, Misc. Circular No. 92, "Check List of the Forest Trees of the United States" there are 131 species of trees in Region 3.

Of these 131 species four make up 98% of volume of the sawtimber stand. Ponderosa pine (Pinus ponderosa) making up 82% of the volume; Douglas fir (Pseudotsuga taxifolia) making up 10% of the volume; White fir (Abies concolor) making up 3% of the volume; Engelmann spruce (Picea engelmannii) making up 3% of the volume; and Mexican white pine (Pinus strobiformis), Corkbark fir (Abies Arizonica), limber pine (Pinus flexilis), etc., making up the remainder of the volume.

TOTAL CUT SAWTIMBER BY STATES
Data From Census (Calendar Year)

Year	Number Mills Reporting		Total Cut M. F. B. M.		M. F. B. M. Total
	Arizona	New Mexico	Arizona	New Mexico	Arizona and New Mexico
1926	23	67	115.000	127.000	242.000
1927	26	73	169.000	173.000	342.000
1928	25	77	158.000	162.000	320.000
1929	31	78	175.000	148.000	323.000
1930	26	76	95.000	143.000	238.000
1931	26	57	85.000	58.000	143.000
1932	22	52	58.000	72.000	130.000
1933	28	55	90.000	89.000	179.000
1934	34	74	73.000	101.000	174.000
1935	29	79	98,716	126.220	224,936
1936					
1937					
1938					

Data for 1935 given here is from preliminary report by Bureau of Census. The sawtimber forests of Arizona and New Mexico have supplied sawtimber for the production of approximately seven and three-quarter billion board feet of sawn products during the period 1879 to 1935 inclusive.

TOTAL CUT FROM NATIONAL FORESTS

All classes of products converted to M Ft. All classes of F. Sales

Year	S-22 Ari-zona	S-22 New Mexico	Commercial Sales & Exchange Arizona	Commercial Sales & Exchange New Mexico	Total Ari-zona & New Mexico	Average price per M ft.	Free Use Arizona	Free Use New Mexico	Free Use Total
1926	379	579	30,761	16,032	46,793	$ 2.59	7,002	13,980	20,982
1927	334	679	69,896	14,353	84,249	2.65	6,767	10,038	16,805
1928	378	695	88,254	18,854	112,031	2.51	6,590	7,643	14,233
1929	261	595	143,575	33,161	176,736	2.49	7,337	10,614	17,951
1930	269	907	85,476	36,194	121,670	2.33	8,670	15,818	24,488
1931	257	953	80,862	14,865	95,727	2.34	10,342	22,503	32,845
1932	371	827	57,206	10,714	67,920	2.31	12,876	27,962	40,838
1933	284	813	75,998	14,196	90,194	2.38	*14,623	29,255	43,878
1934	508	774	34,944	12,826	47,770	2.35	14,568	23,485	38,053
1935	391	841	78,648	17,398	96,046	2.23	15,395	26,725	42,120
1936	484	936	91,670	34,912	126,582	2.34	13,593	22,253	35,846
1937									
1938									

* Previous figures on "Free Use" are calendar year. This year and subsequent years are fiscal year.

Handled under cooperative agreement (State timber) 17,452 M (C.Y.1936)
Handled under cooperative agreement (Private timber) 2,627 M (C.Y.1936)

COMPARATIVE PAINTABILITY OF DIFFERENT SPECIES OF WOODS

Group no.	Description of group	Species
1	Woods on which paints of types A and B disintegrate slowly.	Softwoods Cedars Southern cypress Redwood
2	Woods on which paints of type A disintegrate slowly but those of type B disintegrate somewhat more rapidly than they do on woods of group 1	Softwoods Northern white pine Sugar pine Western (Idaho) white pine
3	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of group 1	Hardwoods Aspen Cottonwood Yellow poplar Softwoods White fir Hemlocks Lodgepole pine Ponderosa pine Engelmann spruce Sitka spruce
4	Woods on which paints of types A and B disintegrate more rapidly than they do on woods of group 3	Hardwoods Beech Birch Maple Gums Softwoods Douglas fir Norway pine Southern yellow pine Western larch
5	Woods unsuitable for conventional house painting because wood filler is required to fill the pores properly.	All hardwoods with pores larger than those in birch, such as ash, chestnut, elm, hickory, oak, walnut

NOTE: Paints of type A are those that fail by checking and crumbling such as pure white lead paint; those of type B fail by cracking, curling, and flaking, such as paints containing zinc oxide mixed with other pigments.

COMPARATIVE DECAY RESISTANCE OF HEARTWOOD OF LOCAL AND FREQUENTLY-USED OUTSIDE SPECIES

(Applies only to heartwood, untreated. Sapwood of no species is durable under conditions favoring decay; i. e., in contact with soil, poorly-drained or aerated parts of buildings, bridges, etc.)

Durable Group

Cedars
Junipers
Black locust
Osage orange
Redwood
Southern cypress

Nearly as Durable Group

White oaks
Honey locust
Dense Douglas fir
Dense southern pine
Dense larch

High Intermediate Group

Cypress (Cupressus)
Douglas fir (unselected)
Southern pine (unselected)
Larch (unselected)

Low Intermediate Group

Red oaks
Pines (other than southern)
Spruces
Maple (hard and red)
Ashes
Hemlocks

Nondurable Group

True firs (concolor, alpine, balsam, etc.)
Aspen
Cottonwood
Willows

NOTE: When used under decay-inducing conditions the woods in the last three groups should be treated with an approved preservative and in so treating sapwood all around is preferable.

SOME WOOD UTILIZATION FACTS

All other things being equal, that is, grade for grade:

1. Sapwood of any species is as strong when used as a beam or post and as stiff as the heartwood of that species.

2. Red (heartwood) hickory tool handles are as strong as white (sapwood) handles.

3. Timber cut from dead trees (free from decay) is as strong as that cut from live trees.

4. The harder the wood the higher its nail-holding power but the more easily it splits. Conversely, the softer the wood the lower its nail-holding power but the less easily it splits. Hence, use slimmer and more nails in hardwoods and larger and less nails in softwoods.

5. Good air-seasoned wood and good kiln-dried wood of the same species at the same moisture content are of equal strength.

6. From the principal property standpoints the oaks are classed commercially in two groups - white and red. Thus the three important southwestern species of oak are of approximately equal value and behavior in use.

   Arizona white oak (Q. arizonica)
   Emory oak (Q. emoryi)
   Rocky Mountain white oak (Q. utahensis)

7. Sapwood of no species is durable.

8. In untreated condition, with the same proportion of heartwood present, there is no difference in durability of round and split posts but splitting often changes the relative proportion by volume of sapwood and heartwood.

9. Generally the softer a wood the better it takes and holds paint.

10. In repainting buildings use the paint of the same manufacturer as was originally used since coats of paints of different formula usually are not compatible.

11. Uneven coatings on wood cause warping.

12. Of all the lumber called or sold under a commercial or trade name including the words, "white pine," that cut from only the following species is true white pine:

    Northern white pine (P. strobus)
    Western (Idaho) white pine (P. monticola)
    Sugar pine (P. lambertiana)
    Limber pine (P. flexilis)
    Whitebark pine (P. albicaulis)
    Mexican white pine (P. strobiformis)

All others belong to the hard or southern yellow pine group (i. e., longleaf, shortleaf, loblolly, slash, etc.); or to the intermediate, red, or nut group (i. e., Norway, lodgepole, jack, ponderosa, pinon, etc.).

FUEL VALUE OF WOOD

(Local species and typical others for comparison)

Approximate equivalents of one ton (2,000 pounds) of coal in terms of one cord of 128 cubic feet containing 80 cubic feet of solid wood.

One cord of	One and one half cords of	Two cords of
Oaks	Soft maple	Cedars
Locusts	Sycamore	Cypress (Cupressus)
Hard maple	Mesquite tops	Cottonwoods
Ashes	Douglas fir	Aspen
Hickory	Southern pines	Other pines
Mesquite roots	Hemlocks	
	Larch	

NOTE: Of all American species of wood, mesquite is one of the few in which the root-wood is of higher specific gravity than above-ground wood. It pays to use root-wood for fuel and the grubbing will improve many of our ranges.

Water Yield From Small Typical Mountain Watershed,
Open Forest Cover--Elevation 5,000 to 6,000
Applicable to Central Arizona
(Data from Parker Creek Branch Station)

Year	Season	Rain Inches	Run-off Cubic Feet	Cubic Feet Per Acre	Total rain before run-off began	Lag in days before run-off began	Percent run-off to rainfall	Acre-feet per inch of rain
1934	Summer	7.54	220,770	315	5.17	60	1.0	0.7
1934	Winter	19.93	17,959,000	25,700	1.00	1	35.5	21.0
1935	Summer	7.78	25,895	37	3.30	30	0.1	0.08
1935	Winter	16.64	13,683,403	19,600	1.11	15	32.3	19.0

Water measurements recorded by weirs at lower extremity of watershed.

Soil Erosion In Relation To Plant Cover

Vegetation		Average annual rainfall	Elevation	Slope	Exposure	Soil	Eroded material cubic feet per acre	Erosion in inches over the area	Length of Record
Character	Density								
	Percent	Inches	Feet	Pct.			Cubic feet	Inches	Years
Deteriorated Chaparral and half-shrubs. Heavily grazed in past - lightly grazed for past 3 years	14 - 30% of cover large dense crowned shrubs	17	3,700	35	North	Deep gravelly sandy loam Granitic soil type area	423 per annum. Eroded slopes, deep gullies.	.11 per year 1.10 in 10 years	5
Deteriorated Chaparral and grass now revegetated. Protected for 3 years.	50 - About 1/3 large shrubs Moun. mahogany, garrya, etc. 2/3 side oats, bull-grass, hairy grama, white eriogonum.	23	5,400	60	South	Rocky clay loam. Quartzite soil - type area	Negligible. Old gully through center of area is healing	Negligible	3
Deteriorated Semi-desert shrub, no perennial herbaceous vegetation.	Density varies annuals only. Winter annuals removed	14		2 to 3	South	Heavy clay soil, Conglomerate clay - gravel soil-type area.	Gentle slopes, no gullies, sheet wash at rate of 138 cu.ft. per yr.	.036 per year. About 1 inch in 28 years.	1½
	Winter annuals left on ground	14		2 to 3	South		Gentle slopes, no gullies, sheet wash at rate of 81 cu.ft. per yr.	.021 per year. About 1 inch in 48 years	1½

Livestock Grazed Under Permit On National Forests

C. Y.	Cattle	Horses	Sheep	Goats	Swine	Total	Exempt Stock
ARIZONA							
1926	227,198	2,539	257,575	1,140	271	488,723	21,551
1927	207,517	2,631	337,786	1,796	268	549,998	21,097
1928	186,277	2,231	286,231	1,766	460	476,965	19,495
1929	181,125	1,951	351,221	1,397	355	536,049	18,631
1930	172,024	1,533	352,368	426	272	526,623	11,073
1931	178,900	1,427	331,329	3,345	196	515,197	10,778
1932	181,388	1,391	262,652	1,786	157	447,374	10,460
1933	185,711	1,312	361,013	0	115	448,151	10,824
1934	188,281	1,018	245,189	10	80	434,648	10,629
1935	181,363	912	252,117	0	55	434,447	10,398
1936	180,046	1,074	270,029	600	50	451,799	11,273
1937							
1938							
NEW MEXICO							
1926	91,364	3,071	197,931	10,390	180	302,936	13,463
1927	89,909	3,350	220,916	11,696	145	326,016	11,190
1928	81,065	3,446	227,651	10,491	168	322,821	12,167
1929	81,044	3,381	244,509	10,427	134	339,495	11,024
1930	82,049	2,964	225,577	10,526	84	321,200	11,044
1931	86,197	2,651	217,044	9,592	102	315,586	10,374
1932	88,669	2,148	211,156	10,850	104	312,927	11,581
1933	91,747	1,704	191,617	10,225	60	295,353	11,488
1934	92,923	1,548	200,156	8,082	19	302,728	11,467
1935	89,174	1,755	179,410	8,639	15	278,993	7,641
1936	86,636	1,894	189,446	6,988	0	284,964	10,425
1937							
1938							

Estimates Of Game On National Forests

	Year	Badger	Beaver	Fox	Mink	Raccoon	Ringtail Cat	Skunk	Weasel
		Fur-Bearing Animals							
Arizona	1935	4,030	1,020	19,250	60	6,450	5,460	46,880	2,550
	1936	4,075	940	21,450	55	6,535	5,775	44,800	2,360
	1937								
	1938								
	1939								
New Mexico	1935	2,840	1,740	6,880	810	1,510	2,100	27,450	1,640
	1936	2,650	1,720	6,935	495	1,545	2,000	28,365	1,630
	1937								
	1938								
	1939								
Total Region 3	1935	6,870	2,760	26,130	870	7,960	7,560	74,330	4,190
	1936	6,725	2,660	28,385	550	8,080	7,775	73,165	3,990
	1937								
	1938								
	1939								

	Year	Antelope	Bear: Black or Brown	Bear: Silver Tip or Grizzly	Deer	Elk	Mtn. Sheep	Peccary or Javelina	Squirrel	Turkey
		Game Animals								
Arizona	1935	5410	775	6	80,170	4810	190	5,200	50,550	9,490
	1936	5040	820	-	81,090	4605	175	5,405	54,810	10,290
	1937									
	1938									
	1939									
New Mexico	1935	1080	1,320	19	90,520	900	105	-	37,850	14,790
	1936	1040	1,350	5	86,460	855	115	-	40,450	14,400
	1937									
	1938									
	1939									
Total Region 3	1935	6490	2,095	25	170,690	5710	295	5,200	88,400	24,280
	1936	6080	2,170	5	167,550	5460	290	5,405	95,260	24,690
	1937									
	1938									
	1939									

	Year	Wild Cat or Lynx	Coyotes	Lions	Wolf	Wild Dog
		Predatory Animals				
Arizona	1935	13,370	20,140	530	30	
	1936	12,860	20,850	515	10	
	1937					
	1938					
	1939					
New Mexico	1935	6,230	11,430	430	45	
	1936	6,345	11,325	420	24	12
	1937					
	1938					
	1939					

Game Animals Killed By Man

	Year	Ante-lope	Bear Black or Brown	Deer	Elk	Peccary or Javalina	Squirrel	Turkey
Arizona	1935	55	75	2870	144	5	280	915
	1936	20	85	3320	100	25	455	755
	1937							
	1938							
	1939							
New Mexico	1935	5	95	2080	9		1130	1075
	1936	50	75	2005	15		1840	830
	1937							
	1938							
	1939							
Total Region 3	1935	60	170	4950	153	5	1410	1990
	1936	70	160	5 335	115	25	2295	1585
	1937							
	1938							

Game Animals Killed By Predatory Animals

	Year	Ante-lope	Deer	Elk	Peccary or Javalina	Mountain Sheep	Squirrel	Turkey
Arizona	1935	330	13,440	15	165	10	6710	2895
	1936	245	11,430	50	290	10	10290	2730
	1937							
	1938							
	1939							
NEW MEXICO	1935	125	11,010	15			3540	3130
	1936	125	10,730	15		15	5900	2905
	1937							
	1938							
	1939							
Total Region 3	1935	455	24,450	30	165	10	10250	6025
	1936	370	22,160	65	290	25	16190	5635
	1937							
	1938							
	1939							

	Year	Wild Cat or Lynx	Coyotes	Wild Dog	Lion	Wolf	Number of Hunters
Arizona	1935	1985	3245		121	12	13,690
	1936	2395	4735		160	7	13,395
	1937						
	1938						
	1939						
New Mexico	1935	675	1315		169	1	7,185
	1936	910	1595	3	105	4	7,740
	1937						
	1938						
	1939						

RANGE FORAGE EQUIVALENTS

Average Grazing Capacities Per Cow Yearlong

Santa Rita Experimental Range - Semi-desert Mixed Grass Type

Well grassed foothill areas - density .40 - 24 surface acres.
Mesa type areas - - - - - - - density .25 - 32 surface acres.

Jornada Experimental Range - Black Grama and Tobosa Types

	Density	A. per cow per yr.
1. Grasslands (more than 60%)		
a. Black grama (70+%) best grass	.25	30
b. Black grama- dropseeds- 3-awn	.20	40
c. Dropseeds-3-awn - grama - tobosa	.25	45
d. Tobosa - burro grass - alkali sacaton	.35	35
2. Brush types (more than 95%)		
a. Mesquite sandhills (mesquite - chamiza - snakeweed - sand sage - yucca - weeds)	.15	135
b. Blackbrush - creosote bush - mixed grasses	.10	150
3. Foothills and mountains		
a. Lower foothills (grama grasses and mixed brush)	.20	80
b. Pinon - juniper - mountain mahogany - mixed brush and grasses	.25	70

Rodent Equivalents

One thousand to twelve hundred kangaroo rats consume and waste sufficient forage to carry one cow yearlong.

Fifty jack rabbits consume and waste sufficient forage to carry one cow yearlong.

Area Available For Livestock

	Arizona	New Mexico	Total
Total land area	72,838,400	78,401,920	151,240,320
Barren and unaccessible	8,396,803	1,266,940	9,663,743
Other non-grazable	1,853,855	3,059,800	4,913,655
Total non-grazable	10,250,658	4,326,740	14,577,398
Total gross grazable	62,587,742	74,075,180	136,662,922
Closed to grazing	782,169	270,658	1,052,827
Total net area available for livestock - acres	61,805,573	73,804,522	135,610,095
Percent	84.9	94.1	89.5

GOVERNMENT OWNED RANGE IMPROVEMENTS - JUNE 30, 1936

NEW MEXICO

Forest	Fences Miles	Fences Cost	Corrals Number	Corrals Cost	Improved Stock Driveways Miles	Improved Stock Driveways Cost	Water Development Number	Water Development Cost	Other Cost	Total
Apache *	369	$ 89,357	17	$ 757			17	$ 1,700	$ 246	$ 92,060
Carson	283	83,436	10	425			49	6,700		90,561
Cibola	667	183,580	1	150			46	18,139		201,869
Coronado **	79	19,832	1	83			16	7,886		27,801
Gila	720	168,448	39	3,411			60	23,310	6,664	201,833
Lincoln	603	207,072	2	77			73	31,529		238,678
Santa Fe	480	111,047	7	529	8	157	21	3,607		115,340
Total	3,201	$ 862,772	77	$ 5,432	8	$ 157	282	$ 92,871	$ 6,910	$ 968,142

* One-half of total for Apache, situated in Arizona and New Mexico

** Eight per cent of Coronado situated in New Mexico

No stock bridges reported in New Mexico

GOVERNMENT OWNED RANGE IMPROVEMENTS - JUNE 30, 1936

ARIZONA

Forest	Fences Miles	Fences Cost	Corrals Number	Corrals Cost	Improved Stock Driveways Miles	Improved Stock Driveways Cost	Water Development Number	Water Development Cost	Other Cost	Total
Apache *	369	$ 89,357	17	$ 757			17	$ 1,700	$ 245	$ 92,059
Coconino	437	149,858	1	499	10	$1,323	72	29,567		181,247
Coronado **	914	228,046	9	957			187	90,693		319,696
Crook	467	155,235	41	2,652			222	47,223	3,258	208,368
Kaibab	529	139,733	15	3,602	6	982	92	35,582	4,085	183,984
Prescott	502	170,364	12	1,213	8	1,121	83	131,033		303,731
Sitgreaves	320	61,441	3	99			27	14,983		76,523
Tonto	649	196,411	4	59	95	1,833	133	25,680	10,016	233,999
Total	4,187	$1,190,445	102	9,838	119	5,259	833	$376,461	$17,604	$1,599,607
Tonto: 1 Stock Bridge: Cost $3,403										3,403
									Total	$1,603,010

* One-half of total for Apache situated in Arizona and New Mexico

** Ninety-two per cent of Coronado in Arizona, 8% in New Mexico

These figures cover the Forests but the Southwestern Forest and Range Experiment Station has a total of: 178 miles of fences, costing $41,058; 19 corrals, costing $578; and 41 water developments, costing $34,748.

Region 3 LAND DISTRIBUTION STATISTICS 1937

Distribution Of Lands In Arizona	Area Acres	% To Total Area Of State
Federal		
Indian Reservations	22,237,608	30.53
Grazing Districts and Public Domain	13,073,058	17.95
National Parks and National Monuments	1,100,753	1.51
Santa Rita Experimental Range	52,399	.07
Military Reservations *	67,737	.09
National Forests (net) **	11,389,357	15.64
Other-Miscellaneous-Including power withdrawals, etc.	3,457,544	4.75
Total Federally Owned or Managed	51,378,456	70.54
State		
Total State Owned	8,356,497	11.47
Private		
Private in farms and ranches	10,513,627	14.43
Private - other	2,589,820	3.56
Total Privately Owned	13,103,447	
Total Area of State	72,838,400	100.00

Distribution Of Lands In New Mexico		
Federal		
Indian Reservations	5,085,460	6.49
Grazing Districts and Public Domain	11,648,879	14.86
National Parks and National Monuments	179,286	.23
Jornada Experimental Range	193,522	.24
National Forests (net) **	8,542,328	10.90
Other-Miscellaneous-Including power withdrawals, etc.	1,578,917	2.01
Total Federally Owned or Managed	27,228,392	34.73
State		
Total State Owned	12,697,651	16.20
Private		
Private in farms and ranches	30,858,034	39.36
Private - other	7,617,843	9.71
Total Privately Owned	38,475,877	
Total Area of State	78,401,920	100.00

* Exclusive of area now within the forest
** Latest available figures

The net forest area in Arizona and New Mexico totals: 19,931,685 Acres.

Recreation Visitors

	F. Y. 1936		F. Y. 1937		F. Y. 1938	
	Visitors	Transients	Visitors	Transients	Visitors	Transients
Arizona	339,432	2,537,510				
New Mexico	197,044	700,315				
Region 3	536,476	3,237,825				

Grand Total: 3,774,301

Special Uses

	In Force 6/30/36			6/30/37			6/30/38		
	Free	Charge	Total	Free	Charge	Total	Free	Charge	Total
Arizona	4,475	1,466	5,941						
New Mexico	1,744	695	2,439						
Region 3	6,219	2,161	8,380						

LAND EXCHANGE

F. Y. 1936 (Latest Available)

Offered Lands - Total Consummated		Area Accepted	Estimated Value
Arizona	36	183,676.18	$336,432.17
New Mexico	44	142,150.07	459,993.13
Total	80	325,826.25	$796,425.30

Selected Lands - Total Consummated

States	Area	Land Value	Timber M. Ft. B. M.	Timber Value
Arizona	16,609.213	$34,670.65	116,487,708	$282,602.52
New Mexico	8,135.200	14,535.63	177,777,905	406,658.63
Region 3-Total	24,744.413	$49,206.28	294,265,613	$689,261.15

NATIONAL FOREST AREAS

To June 30, 1936

Arizona	Net Area	New Mexico	Net Area
Apache	679,352	Apache	889,577
Coconino	1,725,470	Carson	1,128,281
Coronado	1,323,799	Coronado	124,988
Crook	1,422,761	Cibola	1,641,015
Kaibab	1,771,487	Gila	2,393,536
Prescott	1,253,810	Lincoln	1,131,726
Sitgreaves	801,457	Santa Fe	1,233,205
Tonto	2,411,221	Total - New Mexico	8,542,328
Total - Arizona	11,389,357		

Net area of the 147 National Forests: 165,978,691 acres

IMPROVED PUBLIC CAMPGROUNDS ON NATIONAL FORESTS IN REGION 3

Arizona

Apache

Blue River - 3 areas
K. P. Creek
Hannagan
East Buffalo Creek - 5 areas
West Buffalo Creek - 2 areas
P. S. Point
Greer - 2 areas
Elderberry Spring
Alpine Divide

Coconino

Lake Mary - 3 areas
Mormon Lake - 4 areas
Pine Tree Flat
Harding Spring
Slide Rock
Banjo Hill
Purtymans
Townsend

Coronado

Sabino Canyon - 2 areas
Madera Canyon - 4 areas
Pena Blanca
Cochise Park
Bear Wallow
Upper Sabino
Soldier Camp
Herb Martyr
Cave Creek - 3 areas
Rustler Park
Sunnyside
Cypress
Hermitage
Bathup
Pinery Canyon - 2 areas
Turkey Creek - 3 areas

Crook

Strayhorse Spring
Engineer Spring
Honeymoon
Granville
Marijilda
Stockton Pass
Juan Miller - 2 areas

Crook (Cont'd.)

Wet Canyon
Noon Creek
Turkey Flat
Shannon
Hospital Flat
Columbine
Pinaltop
Pioneer Pass - 4 areas
Jones Water
Oak Flat

Kaibab

Jacob Lake
Sycamore Rim
J. D. Dam
Williams West
White Horse Lake

Prescott

Indian Creek
Wolf Creek
Mingus Mtn. - 2 areas
Powell Spring
Granite Mountain

Sitgreaves

Lakeside
Pinetop
Mogollon Rim - 2 areas

Tonto

Seven Springs
Cave Creek
Pine
East Verde
Horton Tonto Creek
Tonto
Canyon Lake - 2 areas
Horse Lake
Stewart Mountain
Coon Bluff

IMPROVED PUBLIC CAMPGROUNDS ON NATIONAL FORESTS IN REGION 3

New Mexico

Carson

Taos Canyon - 4 areas
Viniteria
Angostura
Agua Piedra (1 winter sports division under construction)
La Junta - 6 areas
Cabresto Lake
Santa Barbara
Red River - 4 areas
Hondo Canyon - 6 areas
El Rito - 3 areas

Cibola

Trigo Canyon
Juan Tabo
Tejano Canyon
La Cueva
Water Canyon
Monica Canyon
Lobo
Canyon Colorado
Ranger Station
4th July Spring
Tajique
Cienega
Sulphur
Doc Longs
Tree Spring
Balsam Glade
Capulin
Oak Flat
Sandia Crest - 2 areas
Las Huertas
Cole Spring
Cedro Peak
McGaffey

Jornada Experimental Range

Rope Springs

Gila

Cherry Creek
McMillan
Pine
Goforth
Sapio
Rocky
Black Canyon - 2 areas
Gilita
Willow Creek - 2 areas
Whitewater
Big Dry
Cold Spring

Lincoln

Schoolhouse
Dark Canyon
Lower Ruidoso
Cherokee Bill
Cedar Creek
Alto
South Fork
Philadelphia
James Canyon
Carr Canyon
Sitting Bull Falls
Red Cloud Canyon
Pine Lodge

Santa Fe

Polica
Los Conchas
East Fork Jemez
Jemez - 3 areas
Field Tract
Holy Ghost
Windsor
Panchuela
Gallinas - 3 areas
Tesuque

List Of Primitive Areas - 11/10/36

Arizona

Forest	Name of Area	Acreage: National Forest	Acreage: Other	Logging	Grazing	Approved
Apache(Crook)	Blue Range	216,737	1,427	Deferred	To capacity	6-21-33
Apache	Mt. Baldy	7,400		Inaccessible	Continued	10-1-32
Coronado	Chiricahua	17,280		Discouraged	Conservative	2-28-33
Crook	Galiuro	50,200		Discouraged	Reserve range	10-1-32
Prescott	Pine Mountain	17,424	76	None	To decrease	6-8-33
Tonto	Sierra Ancha	33,934	66	Discouraged	Conservative	2-28-33
Coconino-Prescott-Kaibab	Sycamore Canyon	46,122	1,108	None	Continued	7-19-35

New Mexico

Gila-Revised	Gila	555,099	8,008	Inaccessible	Continued	6-8-33
Gila	Black Range	168,424	1,560	Discouraged	Conservative	6-8-33
Lincoln	White Mountain	22,800	1,200	Discouraged	"	2-28-33
Santa Fe	Pecos Division	136,460	1,360	Discouraged	To continue	6-21-33
Santa Fe	San Pedro Parks	45,000		Not contemplated	Continued	5-4-31
Total		1,316,880	14,805			

Roads And Trails

To End of Fiscal Year, June 30, 1936

Type of Road	Construction Miles	Construction Cost	Maintenance Miles	Maintenance Cost
During Fiscal Year 1936 — ARIZONA				
Forest Highways	27½	$ 430,704	138	$ 12,513
Forest Development Roads	228	616,793	4233	106,274
Trails	161	36,696	2708	18,458
Total	416½	$1,084,193	7079	$ 137,245
To June 30, 1936				
Forest Highways	660	8,081,780		329,859
Forest Development Roads	2857	4,786,236		765,697
Trails	2289	374,970		183,176
Total	5806	13,242,986		$1,278,732
During Fiscal Year 1936 — NEW MEXICO				
Forest Highways	7	213,078	124	67,269
Forest Development Roads	180	651,710	2372	261,045
Trails	56	11,803	3364	14,061
Total	243	$ 876,591	5860	342,375
To June 30, 1936				
Forest Highways	327	5,305,672		308,475
Forest Development Roads	2025	3,616,770		854,268
Trails	1773	212,945		150,135
Total	4125	9,135,387		1,312,878
During Fiscal Year 1936 — REGION				
Forest Highways	34½	643,782	262	79,782
Forest Development Roads	408	1,268,503	6605	367,319
Trails	217	48,499	6072	32,519
Total	659½	1,960,784	12939	479,620
To June 30, 1936				
Forest Highways	987	13,387,452		638,334
Forest Development Roads	4882	8,403,006		1,619,965
Trails	4062	587,915		333,311
Total	9931	$22,378,373		$2,591,610

NET RECEIPTS FOR THE FISCAL YEAR, 1936

State	TIMBER				GRAZING		
	Sales	Settlement	Trespass	Timber Products	Horses Cattle Swine	Sheep and Goats	Trespass
Arizona	$201,707.99	$247.21	$86.30	$157.83	$ 94,148.50	$24,673.79	$2,001.67
New Mexico	29,011.67		78.04	366.93	47,945.95	20,866.10	574.96
Region 3	$230,719.66	$247.21	$164.34	$524.76	$142,094.45	$45,539.89	$2,576.63

State	Special Use	Water Power	Fire Trespass	Property Trespass	Total
Arizona	$19,156.23	$6,506.35			$348,685.87
New Mexico	9,696.83		$10.00		108,550.48
Region 3	$28,853.06	$6,506.35	$10.00		$457,236.35

Due School Fund (Enabling Act of June 20, 1910)

Arizona	$31,329.43
New Mexico	356.05

Net amounts on which 25% and 10% are computed:

Arizona	$317,356.44
New Mexico	108,194.43

Due States; 25%

Arizona	$79,339.11
New Mexico	27,048.61

Due Road and Trail Fund: 10%

Arizona	$31,735.64
New Mexico	10,819.44

Value of timber delivered in exchange for land under the Act of March 20, 1922, less value previously delivered in cases rejected during year: $31,061.00

NATIONAL FOREST AREAS BY COUNTIES
("Net" or Actual National Forest Lands)
June 30, 1936

Forest	County	Net Forest Area (Acres)	Amount Payable to States (Act 6/20/10)	Amount Paid To States - F. Y. 1936 (25% of Receipts) (Act 5/23/08)
Apache	Apache	442,541		$ 1,389.76
	Greenlee	236,811		743.69
	Total	679,352	$ 842.46	2,133.45
Coconino	Coconino	1,299,152		11,454.76
	Yavapai	426,318		3,758.89
	Total	1,725,470	6,007.57	15,213.65
Coronado	Cochise	488,445		2,113.30
	Pima	385,367		1,667.32
	Pinal	24,723		106.97
	Santa Cruz	425,264		1,839.93
	Total	1,323,799	2,261.68	5,727.52
Crook	Cochise	22,409		75.66
	Gila	340,456		1,149.98
	Graham	397,264		1,341.86
	Greenlee	512,118		1,729.81
	Maricopa	10,866		36.70
	Pinal	139,657		471.73
	Total	1,422,761	1,897.69	4,805.74
Kaibab	Coconino	1,727,195		9,018.83
	Mohave	28,059		146.52
	Yavapai	16,233		84.76
	Total	1,771,487	3,652.68	9,250.11
Prescott	Coconino	43,332		135.40
	Yavapai	1,210,478		3,782.46
	Total	1,253,810	1,547.09	3,917.86
Sitgreaves	Apache	43,411		1,652.90
	Coconino	287,325		10,940.08
	Navajo	470,721		17,923.01
	Total	801,457	12,050.15	30,515.99
Tonto	Gila	1,336,199		4,308.47
	Maricopa	681,043		2,195.97
	Pinal	59,028		190.33
	Yavapai	334,951		1,080.02
	Total	2,411,221	3,070.11	7,774.79
Total for Arizona		11,389,357	$31,329.43	$79,339.11

Distribution By Counties of the 25% Fund (Last Column)

Apache	$ 3,042.66	Greenlee	$ 2,473.50	Pinal	$ 769.03
Cochise	2,188.96	Maricopa	2,232.67	Santa Cruz	1,839.93
Coconino	31,549.07	Mohave	146.52	Yavapai	8,706.13
Gila	5,458.45	Navajo	17,923.01	Total	$79,339.11
Graham	1,341.86	Pima	1,667.32		

STATE OF NEW MEXICO

NATIONAL FOREST AREAS BY COUNTIES
("Net" or Actual National Forest Lands)
June 30, 1936

Forest	County	Net Forest Area (Acres)	Amount Payable to (Act of 6/20/10)	Amount Paid To States - F. Y. 1936 (25% of Receipts) (Act of 5/23/08)
Apache	Catron	889,577	$ 40.26	$ 3,059.36
Carson	Colfax	6,293		25.48
	Mora	2,496		10.11
	Rio Arriba	775,619		3,140.50
	Taos	343,873		1,392.34
	Total	1,128,281	60.14	4,568.43
Cibola	Bernalillo	81,080		230.39
	Catron	203,511		578.29
	McKinley	112,813		320.56
	Sandoval	37,956		107.85
	Sierra	20,766		59.01
	Socorro	926,699		2,633.26
	Torrance	169,845		482.62
	Valencia	88,345		251.05
	Total	1,641,015	61.38	4,663.03
Coronado	Hidalgo	124,988	7.80	592.20
Gila	Catron	1,141,290		2,889.09
	Grant	885,057		2,240.45
	Hidalgo	7,653		19.37
	Sierra	359,536		910.14
	Total	2,393,536	79.76	6,059.05
Lincoln	Chavez	40,458		173.78
	Eddy	134,739		578.75
	Lincoln	440,844		1,893.57
	Otero	423,221		1,817.88
	Socorro	1,866		8.05
	Torrance	90,598		389.11
	Total	1,131,726	63.99	4,861.14
Santa Fe	Mora	82,428		216.92
	Rio Arriba	412,352		1,085.18
	Sandoval	273,925		720.88
	San Miguel	282,964		744.67
	Santa Fe	179,615		472.69
	Taos	1,921		5.06
	Total	1,233,205	42.72	3,245.40
Total for New Mexico		8,542,328	356.05	27,048.61

Distribution by Counties of the 25% Fund (Last Column)

Bernalillo	$ 230.39	Lincoln	$1,893.57	Santa Fe	$ 472.69
Catron	6,526.74	McKinley	320.56	Sierra	969.15
Chavez	173.78	Mora	227.03	Socorro	2,641.31
Colfax	25.48	Otero	1,817.88	Taos	1,397.40
Eddy	578.75	Rio Arriba	4,225.68	Torrance	871.73
Grant	2,240.45	Sandoval	828.73	Valencia	251.05
Hidalgo	611.57	San Miguel	744.67	Total	$27,048.61

LIST OF FORESTRY SCHOOLS IN THE UNITED STATES
With Courses Leading To A Degree In Forestry

University of California, Berkeley, Calif.
Colorado State College, Fort Collins, Colo.
Connecticut State College, Storrs, Conn.
Cornell University, Ithaca, N. Y.
Duke University, Durham, N. C.
University of Georgia, Athens, Ga.
Harvard University (Harvard Forest) Petersham, Mass.
University of Idaho, Moscow, Ida.
Iowa State College of Agriculture, Ames, Iowa
Louisiana State University, Baton Rouge, La.
University of Maine, Orono, Maine.
Michigan State College, East Lansing, Mich.
University of Michigan, Ann Arbor, Mich.
University of Minnesota, St. Paul, Minn.
University of Montana, Missoula, Mont.
University of New Hampshire, Durham, N. H.
New York State College of Forestry, Syracuse University, Syracuse, N. Y.
North Carolina State College of Agriculture and Engineering, Raleigh, N.C.
Oregon State College, Corvallis, Oregon.
Pennsylvania State Forest School, State College, Penn.
Purdue University, Lafayette, Ind.
Utah State Agricultural College, Logan, Utah.
State College of Washington, Pullman, Wash.
University of Washington, Seattle, Wash.
Yale University, New Haven, Conn.
University of Illinois, Urbana, Ill.
University of Nebraska, Lincoln, Nebr.
University of Nevada, Reno, Nev.
University of Arizona, Tucson, Ariz.
Dept. of Horticulture and Forestry, University of Ohio, Columbus, Ohio.
University of Missouri, Columbus, Missouri
University of Florida, Gainesville, Fla.

HISTORY OF FORESTRY DEVELOPMENT IN THE UNITED STATES

1631	First sawmill at Berwick, Maine
1640	First ordinance governing timber use. (Exeter, N. H.)
1822	DeWitt Clinton, Governor of New York, pleaded for practice of conservation
1828	Live oak and cedar reservations for Navy made in Louisiana. (19,000 acres).
1831	Timber cutting on public lands prohibited.
1849	Report of Patent Office urges conservation.
1867	Wisconsin appointed committee to report on effect of forest destruction.
1870	Census. Forest area canvassed.
1872	Governor Morton of Nebraska established Arbor Day.
1873	Forestry Committee of American Association for the Advancement of Science presented memorials to Congress, asking for the appointment of a commission of forestry. Timber culture act.
1876	Congress established an "agency" on forestry in the Department of Agriculture. Dr. Franklin B. Hough appointed Commissioner of Forestry.
1877	Congress granted its first appropriation of $6,000 for the purpose of obtaining information preparatory to establishing a Division of Forestry.
1882	American Forestry Association started April 25 at Cincinnati.
1884	The duty of making experiments with timber was added to work of Division of Forestry.
1886	Division of Forestry in Department of Agriculture created.
1891	By Act of Congress, the President was given power to establish forest reservations. President Harrison established the Yellowstone Park Timber Land Reserve to be under control of the Land Office.
1892	Pecos River Forest Reserve established in New Mexico.
1893	Grand Canyon Forest Reserve established in Arizona.
1896	Secretary of Interior requested the National Academy of Science to investigate and recommend a National Forest policy.
1897	By the Act of June 4, the forest reserves were put under administration and from this Act, with subsequent amendments, the forests are now being administered. The Land Office had charge of administration. The Division of Forestry gave technical advice. The U. S. Geological Survey was charged with surveying and mapping the forests.

1898 The Division of Forestry employed a total of six clerks and five scientific employees.
The first field work was done, which consisted of special investigation in connection with lumbering.

1901 The Division of Forestry was raised to the rank of Bureau but the change was in name only.

1905 By the Act of February 1, forestry work was consolidated and the forest reserves were transferred to the Department of Agriculture and the work of the Service as we know it today, started.
In July 1905, the Bureau of Forestry became the Forest Service.

1907 The "forest reserves" were changed to National Forests in name to correct the impression that they were withdrawn from use.

1908 The direct administration of field work was transferred from Washington, D. C., to six district headquarters in the West; in 1914 a seventh district was established for the Appalachian region; in 1921, an eighth district was established in Alaska, and in 1929, a ninth district was set up for the Lake States.

1909 Between 1901 and 1909, President Roosevelt set aside over 148,000,000 acres of National Forests; there are now, as of June 30, 1936, 197,434,517 (gross) acres of National Forest land.

1911 By Act of March 1 (Weeks Law), acquisition of forest lands on headwaters of navigable streams east of Mississippi River made possible.

1924 The Reforestation Act (Clarke-McNary) was passed on June 7, greatly extending the scope of government cooperation in forestry.

1928 McNary-Woodruff Act was passed, authorizing appropriations of $2,000,000 for 1929 and $3,000,000 each for 1930 and 1931 for purchase of forest lands.
Forest Research Act (McNary-McSweeney) was passed, providing for a national forest research program on the part of seven governmental bureaus.

1930 Forest Service Districts became "Regions."